

REMARKS

A copy of the reference EP 0 836 887 A, was not submitted earlier as the only available copy was in the original German. A copy of the original along with a machine translation is forwarded herewith.

The rejection of all the claims 1 - 9 on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 7 – 12 of U.S. Patent No. 6,683,031 is respectfully traversed.

The basis for the non-statutory obviousness-type double patenting fails to state what limitations in the rejected claims are not deemed patentably distinct over the invention claimed in claims 7 – 12 of the reference, and why.

This application Ser. No. 10/758,052 is a c-i-p application of the '031 patent and was filed on 14 January 2004 (01/14/04) which is less than one year prior to the issue date of the '031 patent; therefore the c-i-p application is entitled to the filing date of the common subject matter.

Claim 7 of the '031 patent and claim 1 of the '052 application are set forth side-by-side below:

Claim 7 of '031

Claim 1 of '052

<p>A rope handling system for preparing a multi-functional additive from a raw cotton plant material comprising:</p> <p>a pair of non-driven spools of irradiated rope formed from the raw cotton plant material;</p> <p>an idler compensating unit for receiving the ropes from the spools;</p>	<p>A system for chopping rope of cellulose fibers into fragments, comprising,</p> <p>a spool having rope coiled thereon, the spool being fixedly disposed on a rotatable shaft, the rope having a diameter in the range from 3.175 mm (0.125") to 19.05 mm (0.75");</p> <p>a variable speed drive means drivingly engaged with the shaft to rotate it at a</p>
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<p>an uncoiling and tensioning unit for receiving the ropes from the idler compensating units;</p> <p>a slack control unit for receiving the ropes from the uncoiling and tensioning unit;</p> <p>a cutter pinch roll feed unit for receiving ropes from the slack control unit;</p> <p>an inline cutter for receiving and cutting the ropes from the pinch roller feed unit;</p> <p>and a control unit for regulating the operation of the idler compensating unit, the uncoiling and tensioning unit, the slack control unit, the cutter pinch roll feed unit and the inline cutter;</p> <p>whereby the idler compensating unit compensates for the change in side to side angle as the ropes pay off the spools, the uncoiling and tensioning unit controls the feed rate of the overall system, and the slack control unit provides a constant rope tension and feed rate of the ropes into the pinch roll feed unit.</p>	<p>chosen number of revolutions per unit time;</p> <p>a variable speed feeder-pulley over which the rope is trained in non-slipping engagement therewith;</p> <p>control means to control the revolutions per minute of the feeder-pulley within a predetermined range;</p> <p>a train of pulleys over each of which the rope is engaged, the pulleys disposed intermediate the shaft and the feeder-pulley, the train including a dancing roll movable between upper and lower limits;</p> <p>limit switch means to sense the upper and lower limits of travel of the dancing roll;</p> <p>an inline granulator having a bed blade adjustable to provide a cutting clearance of no more than 25.4 μm (0.001") and associated blades revolving at a speed in the range from about 1200 – 1800 revs/min; and,</p> <p>a screen means having openings no larger than 6.35 mm (0.25").</p>
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It is true that the '031 specification states "The micronizing step of the invention is meant to reduce the size of the irradiated product and may be carried out with a jet classifying mill. The micronizing step is intended to reduce the average diameter size of the irradiated plant material to an average diameter size of about 3 microns to 4 microns with 99% of the average diameter sizes being below 10 microns." (see col 2, lines 55 – 59).

Note that Claim 5 of the '031 patent recites a system claiming the system of Claim 7 more broadly, referring to "at least one spool" which is not necessarily a non-driven spool. Claim 7 clearly recites "a pair of non-driven spools".

Claim 5 states:

5. A rope handling system for preparing a multi-functional additive from a raw cotton plant material comprising: at least one spool of irradiated rope formed from the raw cotton plant material; a roller and tensioning structure for receiving the irradiated rope from the spool; a cutter connected to the roller and tensioning structure for chopping the irradiated rope to a predetermined size; and a micronizing structure connected to the cutter for reducing the chopped irradiated rope to a reduced size.

There is no argument that the end goal of the systems of the '031 patent and the '052 application, is to produce micronized cotton fibers without exerting so much tension on the relatively fragile irradiated rope as to break it. The problem of feeding the rope to the in-line cutter without breaking the rope before it gets to the cutter is subject matter common to both the patent and the application. The argument is not whether the problem solved is the same, but whether the elements recited in the system claimed in the '052 application are obvious over the ones claimed in the system of the '031 patent, and therefore not patentably distinct from the claims of the '031 patent.

The key difference between the patented '031 system and the '052 system is that, in the '031 system, rope is *pulled off a spool which is not driven*. The rate at which the rope is pulled off the spool is determined by the combination of an uncoiling and

tensioning unit with a slack control unit. In the '052 system, the rope is fed off the spool which is driven by a variable speed drive so that the rate at which rope is led through the remaining portion of the system is determined right at the outset, at the spool.

Referring now to claim 5 which does not specify whether the spool is driven, note that it cannot suggest driving the spool, to control the speed of rotation of the spool, at a predetermined rate, because that rate has already been determined by the combination of the uncoiling and tensioning unit and the slack control unit. Together they provide a constant rope tension and desired feed rate of the rope(s) into the pinch roll feed unit. Obviously, there is no reason for the '031 claims to suggest "a variable speed drive means drivingly engaged with the shaft to rotate it at a chosen number of revolutions per unit time;" as in the '052 system.

No dependent claim of the '031 patent suggests this essential feature of control of the speed of revolution of the spool. Why would one skilled in the art add a variable speed drive to control the rotation of the spool which is already controlled by the combination of the uncoiling and tensioning unit and the slack control unit.? The office action does not say.

It is also evident that the '031 claims recite neither "a variable speed feeder-pulley over which the rope is trained in non-slipping engagement therewith;" nor a, "control means to control the revolutions per minute of the feeder-pulley within a predetermined range;"

It is the foregoing key features which, in combination with the controlled speed of rotation of the spool, which effectively controls the feed of the rope into the in-line granulator in the '052 system.

No dependent claim teaches the foregoing combination and the office action does not say why it would be obvious to provide such elements in lieu of the elements clearly and unequivocally taught in the '031 patent.

The office action does not state why, if not suggested, the foregoing limitations are inherent in the system claimed in the '031 patent, or why the claims of the '052

application are not patentably distinct from those of the '031 patent.

Further, examination of the limitations recited in the '052 claims would force one skilled in the art to realize that he/she would not consider substituting those limitations for the ones recited in the '031 patent unless it was found, for example, that after building the system of the '031 patent, the limitations recited in the claims of the '031 patent were such that the system could be improved upon.

What is *obvious* is that the '052 system provides a more efficient system for comminuting the irradiated rope into fibers into small enough lengths which are ideally suited for micronizing in a jet classifying mill; and, that there is no suggestion in the invention claimed in the '031 patent that the modifications made in the '052 system would be desirable.

Nor is there any statement in the office action why a mechanical engineer skilled in the art, after studying the system described in detail and claimed in the '031 patent, would conclude that the '031 system should be improved upon, and therefore modified, using the particular combination of elements claimed in the '052 application.

It is respectfully submitted that, in view of the foregoing differences in the elements combined in the '052 system, there is every reason why the limitations of the '052 claims should be granted the timewise extension of the "right to exclude".

It is respectfully requested that the provisional obviousness-type double patenting rejection be reconsidered and withdrawn because the invention defined by claims 1 - 9 of the '052 application is not obvious over the invention defined in the claims 7 - 12 of the '031 patent.

In view of the foregoing remarks and arguments, it is respectfully submitted that the basis for the rejection has been overcome and that the claims are in condition for allowance.

Respectfully submitted,


Alfred D. Lobo (Reg. No. 24,109)